

REMARKS

Claim 12 is pending in the application. Claims 13-17 have been canceled as directed to non-elected subject matter. Claim 12 is rejected.

Claim 12 has been amended to recite that the antibody is "specific for" the antigen. This amendment is supported at least at page 19, line 8.

No new matter is added.

Claim Rejections - 35 U.S.C. § 103

Claim 12 remains rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuno et al. (JBC 1997. 272;1:556-562) in view of Campbell (Monoclonal Antibody Technology. 1984. Published by Elsevier Science Publishers. Pages 1-32), Bost et al. (Immunol. Invest. 1988; 17:577-586) and Bendayan (J. Histochem. Cytochem. 1995; 43:881-886) for reasons of record.

The Examiner previously asserted that Kuno et al. disclose a metalloproteinase that has aggrecanase activity. Further, according to the Examiner, the amino acid region from 249-633 of the metalloproteinase has 63% sequence identity with amino acids 214-583 of SEQ ID NO:1. The Examiner admitted that Kuno et al. does not disclose any antibody to the metalloproteinase.

Campbell was cited as showing that it was routine at the time of the invention to make antibodies to isolated proteins. Bost et al. and Bendayan were cited as teaching that an antibody that is specific to a particular sequence of a protein can specifically react with other proteins containing that sequence.

The Examiner concluded that one of ordinary skill in the art, wanting to make a monoclonal antibody to the metalloproteinase of claim 12 would have readily been able to do so using the metalloproteinase of Kuno et al.

In response, Applicant argued that the sequence that the reference and SEQ ID NO:1 have in common is a highly conserved region. Applicant cited Declerck et al. as evidence that antibodies cannot be generally produced against the auto-antigen and against the highly conserved domains. Applicant also pointed to the data in table III, showing that an antiserum prepared by immunizing rabbit with human u-PA did not show cross immunity to the mouse u-PA having a sequence that was 81% homologous.

The Examiner disagrees and asserts that, in fact, Declerck et al. teach just the opposite. The Examiner asserts that Declerck et al. teaches methods of making and using antibodies that cross-react to epitopes conserved across species by immunizing knock-out mice in which the expression of the target protein has been abolished. The Examiner further asserts that Declerck et al. have produced a panel of monoclonal antibodies in t-PA knock-out mice that cross-react with t-PA antigen from other species. With respect to the data in Table III, the Examiner gives it little weight, stating that the authors say that the data should be interpreted with some caution.

This rejection is overcome by amending claim 12 to recite that the antibody is specific for the metalloprotease consisting of the amino acid sequence set forth in SEQ ID NO:1.

This amendment overcomes the rejection because even if Kuno et al. could be combined with Campbell et al., Bost et al. and Bendayan, the combined references at most teach an antibody that would bind to ADAMTS1. The combined disclosures do not teach or suggest “an

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antibody which is specific for a metalloprotease consisting of the amino acid sequence set forth in SEQ ID NO:1.”

Accordingly, the Examiner is requested, respectfully, to reconsider and remove this rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

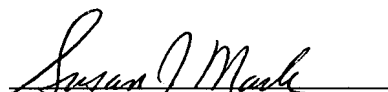
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